

## Response ID ANON-95B1-ZB5C-N

Submitted to PAS 6014 Residential solar photovoltaics (PV) and battery storage systems guideline  
Submitted on 2025-05-06 16:46:15

### Introduction

### Information collection

Please confirm that you have read and agree to this privacy statement:

Yes :  
Yes

### Your details

What is your name?

Name:  
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What is your organisation?

Organisation:  
Orion New Zealand Limited

Please confirm that you have read the information above.

Yes:  
Yes

### Information on how to complete the form

### Your feedback

#### Comment 1

Please select which section you are commenting on:  
1. Scope

Clause you are commenting on :  
Clause 1.1

Comment type:  
General

Comment :

Clause 1.1 states that the scope of the PAS is to set out good practice guidance for residential solar photovoltaic (PV) and battery storage systems. Its primary objective is to provide sound advice on: (a) The benefits of solar. (b) How to maximise the performance of your solar installation. (c) How to best save money and avoid common pitfalls.

Orion supports the concept of the PAS, and thanks Standards NZ for the opportunity to submit on the draft. However, we are concerned about the objectives and scope of the PAS and the overall approach of the document. At this point we do not consider that it is ready for final publication.

One of our main concerns relates to the target audience for the PAS. Sometimes the target audience appears to be the householder, sometimes an installer, sometimes a person working in the sector, or the public sector. We think a householder will find this document confusing because of its length and the amount of detail included. We doubt whether an installer will read the document because the useful information is in the back chapters, and again its too detailed and long. It is difficult to see whether the objectives stated in clause 1.1 are achieved as the document is currently written.

Proposed change:

We suggest an overall review of the approach of the draft PAS.

We also suggest that the better way to go would be for there to be a separate document for householders/ consumers and a separate document for installers.

Would you like to submit another comment?

Yes

## Your feedback

### Comment 2

Please select which section you are commenting on:

1. Scope

Clause you are commenting on :

Clause 1.1

Comment type:

General

Comment :

We have read the submission of the EEA on the draft PAS and we support that submission.

Proposed change:

Refer to the submission of the EEA to EECA.

Would you like to submit another comment?

Yes

## Your feedback

### Comment 3

Please select which section you are commenting on:

1. Scope

Clause you are commenting on :

Clause 1.2

Comment type:

General

Comment :

Clause 1.2 summarises the various sections of the PAS. We are not providing comments on all of the detailed provisions in these sections. Rather our submission includes a selection of comments to illustrate some of the concerns we have with the draft PAS relating to wording, consistency and tone of voice. We also note that given the PAS is called the Residential solar photovoltaic (PV) and battery storage systems guideline, we would expect greater emphasis to be placed on battery storage earlier on in the document. Details about battery storage do not feature substantively until parts 9, 10, and 12 near the end of the PAS.

We are not providing comments on sections 6 to 12 because we would like more time to review and provide meaningful submissions on these sections. In this regard, our recommendation is to provide for a further consultation period so that there is time to thoroughly review the detail in these later chapters.

Proposed change:

Provide a further consultation period to review the draft PAS.

Would you like to submit another comment?

Yes

## Your feedback

### Comment 4

Please select which section you are commenting on:

1. Scope

Clause you are commenting on :

Clause 1.6

Comment type:

General

Comment :

Clause 1.6 contains the definitions. We do not comment on each definition but raise the matters below as examples of where the PAS needs to be reviewed and checked.

We note that there is no definition of grid but there is a definition of network. The terms seem to be used interchangeably throughout the PAS when they have quite distinct meanings in the sector, and this could be confusing. The term network is defined as “the owner/operator of the system of lines that deliver electricity to your installation. This may be a local network or a secondary network .” This definition seems to focus on the owner or operator rather than the network itself. There is also a definition of electricity distribution business (EDB) which focusses on local and secondary networks too. However, there is no definition of a local network or secondary network. Overall, this is quite confusing.

Another definition that is oddly worded is that of “incentives”. The definition starts off by stating “normally government initiatives used to help shift a technology...”. It is not clear to us why there is a focus on government initiatives. Other organisations such as EDBs and retailers are also offering or trialling incentives. The term “incentives” is also used in a variety of ways through the draft PAS and the definition does not necessarily match up with these uses.

Proposed change:

We note that the PAS does not use the definitions in the Code. The drafting team may have considered these overly technical. However, another option would be to use the glossary for the electricity sector prepared by the ENA. These maybe more user friendly depending on the target audience. You can find these definitions by searching for the ENA Glossary for the Electricity Sector.

Would you like to submit another comment?

Yes

Your feedback

Comment 5

Please select which section you are commenting on:

2. Introduction

Clause you are commenting on :

Clause 2.2

Comment type:

General

Comment :

We suggest reviewing this part for correctness and consistency.

For example, clause 2.2 (b) says that “Solar panels drive down the cost of energy consumption. Many people wish to be more self-sufficient. Although it is not financially feasible today to be completely off-grid, it is possible to supplement your energy requirements with cheaper solar PV and battery technology.” For some people it will be financially feasible to be completely off-grid. Further on in this part, the document states that “some households choose not to connect their generation, and some may even be completely “off grid” ”, which seems to cut across the previous statement.

We note that section 2.2 is called “Why should you transition to solar?” However, the final four paragraphs talk about batteries. There may be a better location for these paragraphs.

Proposed change:

Complete a review of this part and assess correctness of headings.

Would you like to submit another comment?

Yes

Your feedback

Comment 6

Please select which section you are commenting on:

2. Introduction

Clause you are commenting on :

Clause 2.3

Comment type:

General

Comment :

This part is headed “How solar PV panels work and why they matter”. However, there is no comment in the paragraphs in this part as to why they do matter or what this means.

Proposed change:

Assess correctness of heading.

Would you like to submit another comment?

Yes

Your feedback

Comment 7

Please select which section you are commenting on:

2. Introduction

Clause you are commenting on :

Clause 2.4

Comment type:

General

Comment :

This part is headed “Exporting electricity”. We think a householder will struggle with interpreting the paragraphs in this part. We have concerns about these statements “Its important to consider feed-in tariffs and buy-back rates against the price of electricity that the retailer offers. When using electricity generated from solar panels or batteries, there is no need to purchase electricity from the grid. This eliminates associated delivery costs. Therefore the most valuable approach for consumers is to utilise the electricity produced on site.”

Proposed change:

Our recommendation is that this paragraph is redrafted so that it better explains electricity delivery charges (including load and export). In particular, it should be clearly explained that there are conveyance costs (network and transmission costs) for exporting solar, as there are when a householder imports electricity.

Would you like to submit another comment?

Yes

Your feedback

Comment 8

Please select which section you are commenting on:

2. Introduction

Clause you are commenting on :

Clause 2.5

Comment type:

General

Comment :

We have concerns about the specific promotion of SEANZ-accredited installers. While we understand the importance of qualified professionals for solar installations, the statement that “many such installers are SEANZ-accredited” appears to give preferential treatment to one particular industry body. This potentially creates an unfair commercial advantage and doesn’t acknowledge other qualified electricians with appropriate credentials who may not be SEANZ members.

Proposed change:

We recommend revisiting this section, and all other references to SEANZ in this document (sections 1.4, 2.2, 5.4.3, Appendix A clause A4), to focus on the required qualifications and licensing required for a solar installer – without specifically promoting SEANZ membership. The document should remain impartial regarding industry associations, while still emphasising the importance of using properly qualified professionals. In addition, the defined term “Competent electrical worker” is not referenced in this section. We recommend reviewing the document to update references to “electricians” or “installers” to this defined term, where appropriate (e.g. clause 3.4(c)).

Would you like to submit another comment?

Yes

Your feedback

Comment 9

Please select which section you are commenting on:  
3. Participating in the electricity market?

Clause you are commenting on :  
Clause 3.5

Comment type:  
General

Comment :

Our suggestion for this part of the PAS is to include a new column that details risks with the purchase and leasing arrangements. We also suggest deleting the reference to zero-cost solar. If it is not offered in New Zealand, we do not think it should be included in the document at this time. We also query the examples column in the energy pricing table. We are not in favour of recommending specific retailers. The document should remain impartial regarding electricity retailers.

We also query whether the Power Purchase Agreement (PPA) is truly “readily available through most retailers” for the average household consumer.

Proposed change:

See above.

Would you like to submit another comment?

Yes

Your feedback

Comment 10

Please select which section you are commenting on:  
3. Participating in the electricity market?

Please further refine which part of the section you are commenting on :  
Clause 3.6

Comment type:  
General

Comment :

We think there is a better place for the paragraphs about energy efficiency that are currently included at paragraph 3.6. If these paragraphs are going to be retained we recommend they should be moved up to the front of the PAS where the document could also set out other considerations to be taken into account before householders invest in solar PV such as

- Financial risks associated with solar panel providers failing (refer the Solar Zero example)
- Curtailment risks if there is congestion on a network, limiting any export credits available, and also see <https://www.theguardian.com/australia-news/2024/oct/12/australian-states-too-much-rooftop-solar>

Proposed change:

See above.

You have reached the maximum of 10 comments. Please submit your comments now. If you would like to submit more comments you can do so by starting a new submission.